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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/913,992	PELZ ET AL.	
	Examiner	Art Unit	
	JEFFREY R. WEST	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11,12,14 and 16-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11,12,14 and 16-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 June 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 15, 2008, has been entered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 11, 12, 14, and 16-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 11 and 19 are rejected as lacking enablement because they each require "performing an error diagnosis of software running on the other components" and "allowing a remote testing and diagnosis of the other components of the distributed system to be carried out."

The specification best describes these features in the following passages:

First on page 5, lines 15-17:

> In addition, service element 2 allows a service provider to carry out a remote diagnosis of the individual components, using communication means 4. This service provider can then test the individual components directly, using communication means 4 and service element 2.

This section, while mentioning a service provider carrying out remote diagnosis and testing, does not enable one having ordinary skill in the art to use both the remote testing and the remote diagnosis. Specifically, by not mentioning any steps to be carried out regarding the test, one having ordinary skill in the art would not understand, and therefore would not be able to perform, the manner for testing. Additionally, this section makes it unclear to one having ordinary skill in the art how the remote diagnosis and testing differ and raises the issue as to whether or not the remote diagnosis and testing are indeed different from each other. The specification then further elaborates the operation of the service provider on page 5, lines 16-25

by only discussing the remote diagnosis, thereby again raising the question as to what constitutes the testing operation and how the testing differs from the remote diagnosis, specifically:

> Service element 2 also contacts the service provider, using communication means 4, when service element 2 can no longer eliminate an error itself. If the component in question can also no longer be repaired using the remote diagnosis of the service provider, then the service provider contacts the user of the distributed system, using communication means 4, in order to request that he or she visit a repair shop. Display 7 and/or communication means 4 is used for this. As an alternative, the audio playback of the car radio, which includes DAB receiver 6, can be used.

The specification then discloses, on page 7, lines 10-19, performing a functional test, but refers to the testing as being performed by the local service element, and not by a remote means, thereby making it unclear to one having ordinary skill in the art whether this testing is considered to be the remote testing, specifically:

> A method known for this is the checksum method. CRC (cyclical redundancy check) sums are calculated using code segments of the software, and are compared. In this manner, an incorrect code can be identified, and, if the remaining software of the service element has the independent capability, then the software can be repaired, e.g. by loading new software parts, so-called patches. In the case of serious software errors of service element 2, an emergency operation of service element 2 can ensure the correction. A functional test of the bus communication can be carried out using predefined signals, which are transmitted on the bus, and to which a certain response from the connected components is expected, this response being known to service element 2. This ensures that an error message of a subsystem is not lost due to a bus interruption.

Finally, the specification, on page 7, line 28 to page 8, line 2 discusses testing with respect to the remote service provider, specifically:

> Service element 2 questions a service provider in certain time intervals, e.g. once a month, if new software versions are available for the individual components of the distributed system. If this is the case, the service element requests such a new software version, and then loads it using communication

means 4. The new software version is tested for errors, using test vectors, and is then configured for the corresponding components. Such an upgrade is then the specific software, or also the manufacturer of the components. It can also be a service company, which takes over the distribution of the software and the maintenance tasks.

However, this section does not remedy the lack of enablement of the claimed limitations because is discusses the testing as testing the new software version for errors. The claimed limitations in question require "performing an error diagnosis of software running on the other components" and "allowing a remote testing and diagnosis of the other components of the distributed system to be carried out", and therefore it is unclear to one having ordinary skill in the art whether the discussed testing of the new software version for errors is with reference to the claimed "performing an error diagnosis of software running on the other components", "remote testing…of the other components", or "remote…diagnosis of the other components".

For these reasons, the Examiner asserts that one having ordinary skill in the art would not be enabled to make/use the claimed "performing an error diagnosis of software running on the other components" and "allowing a remote testing and diagnosis of the other components of the distributed system to be carried out" as required by 35 U.S.C. 112, first paragraph.

Claims 12, 14, 16-18 and 20-23 are rejected under 35 U.S.C. 112, first paragraph, because they incorporate the lack of enablement present in their respective parent claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 11, 12, 14, 17-20 and 23, as may best be understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,370,449 to Razavi et al. in view of U.S. Patent No. 6,512,968 to de Bellefeuille et al.

With respect to claim 11, Razavi discloses a service element that belongs to a distributed system in a motor vehicle as a component (column 6, lines 10-18), the distributed system further including other components that are independent of one another (column 3, lines 30-33) and interconnected by a bus (column 4, lines 40-47), the service element comprising a processing device disposed in the motor vehicle (column 8, lines 21-49) and adapted to perform operations including the operations of configuring the other components (column 7, lines 40-46, column 8, lines 21-29, and column 11, lines 14-20), maintaining the other components (column 13, lines 53-61 and column 15, lines 6-13), allowing a remote diagnosis of the other components of the distributed system to be carried out (column 15, lines 3-10), and performing an emergency function (column 1, lines 41-46 and column 7, lines 54-63).

With respect to claim 12, Razavi discloses that the processing device is further adapted to perform the operations of detecting a new component and for integrating

the new component into the distributed system (column 9, lines 45-54) and operating a display device to represent information about a configuration (column 10, line 46 to column 11, line 12).

With respect to claim 14, Razavi discloses that at least one of the maintaining operation and the correcting operation includes communicating with a communication element for loading new software for the other components (column 13, lines 61-64).

With respect to claim 17, Razavi discloses that the processing device is further adapted to perform the operations operating a display to transfer information about the distributed system to a user of the distributed system (column 11, lines 14-20)

With respect to claim 19, Razavi discloses a distributed system, comprising components connected by a bus (column 4, lines 40-47) the components being independent of each other and being disposed in a motor vehicle (column 3, lines 30-33), one of the components being a service element (column 6, lines 10-18) that includes a processing device adapted to perform operations (column 8, lines 21-49), the operations including configuring the other components (column 7, lines 40-46, column 8, lines 21-29, and column 11, lines 14-20), maintaining the other components (column 13, lines 53-61 and column 15, lines 6-13) allowing remote diagnosis of the other components of the distributed system to be carried out (column 15, lines 3-10), and performing an emergency function (column 1, lines 41-46 and column 7, lines 54-63).

With respect to claim 20, Razavi discloses that at least one of the other components includes a communication element (column 4, lines 54-60 and column 5, line 51).

With respect to claim 23, Razavi discloses that the bus includes one of an electrical wiring system, an optical wiring system, and a radio based system (column 3, lines 53-57).

As noted above, the invention of Razavi teaches many of the features of the claimed invention and while the invention of Razavi does teach uploading new software and performing maintenance and updates of existing software of the other components when necessary, Razavi does not explicitly describe the manner in performing maintenance, specifically by performing an error diagnosis to check the software in accordance with a predetermined value.

De Bellefeuille teaches a computerized automotive service system comprising means for maintaining installed software, as part of an installation/uninstallation feature (column 10, lines 11-13), including an arrangement for performing integrity testing and error diagnosis of software by checking the software in accordance with a predetermined value in order to carry out the corrective maintenance (column 11, lines 12-25).

It would have been obvious to one having ordinary skill in the art to modify the invention of Razavi to explicitly include performing an error diagnosis to check the software in accordance with a predetermined value, as taught by de Bellefeuille, because the combination would have provided a corresponding method for

performing the maintenance of Razavi as part of the software updates that would have improved the operation of Razavi by periodically checking the integrity of the software of the other components to prevent incorrect operation due to software errors (column 11, lines 12-25).

7. Claim 16, as may best be understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Razavi et al. in view de Bellefeuille and further in view of U.S. Patent No. 6,330,499 to Chou et al.

As noted above, the invention of Razavi and de Bellefeuille teaches many of the features of the claimed invention and while the invention of Razavi and de Bellefeuille does teach a communication element for loading new software for the other components as well as performing an error diagnosis of the software, the combination does not explicitly include communicating with a communications element for, in the case of a serious functional error, contacting a service provider.

Chou teaches a system and method for vehicle diagnostics and health monitoring including an in-vehicle computing system (column 2, lines 55-63) connected to a plurality of elements on a bus (column 3, lines 33-37 and column 6, lines 55-56) and an arrangement for allowing a remote diagnosis of the system (column 3, lines 15-31) and a communications element for, in the case of a serious functional error, contacting a service provider (column 5, lines 16-24 and column 7, lines 4-26). Chou also teaches coupling the processor through a communicating

transceiver for communicating over a radio channel to further devices such as a notebook computer (column 3, lines 47-53).

It would have been obvious to one having ordinary skill in the art to modify the invention of Razavi and de Bellefeuille to explicitly include communicating with a communications element for, in the case of a serious functional error, contacting a service provider, as taught by Chou, because, as suggested by Chou, the combination would have aided the user of the system by providing trouble-shooting, diagnosis, tracking, and recommendations, as well as prevented serious consequences (column 1, lines 18-30) and provided emergency responses to an emergency condition, such as the condition signaled by the emergency arrangement of Razavi and de Bellefeuille (column 7, lines 22-26).

8. Claim 21, as may best be understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Razavi et al. in view de Bellefeuille and further in view of U.S. Patent No. 5,465,207 to Boatwright et al.

As noted above, the invention of Razavi and de Bellefeuille teaches many of the features of the claimed invention and while the invention of Razavi and de Bellefeuille does teach a communication element as a transceiver station (i.e. modem) (Razavi; column 11, lines 38-42), the combination does not explicitly indicate that the transceiver station communicates over a radio channel.

Boatwright teaches a vehicle data system including a plurality of system components connected to a bus (Figure 4) wherein one of the components is a

communication element comprising a transceiver station (i.e. modem) communicating over a radio channel (column 6, lines 62-66).

It would have been obvious to one having ordinary skill in the art to modify the invention of Razavi and de Bellefeuille to explicitly indicate that the transceiver station communicate over a radio channel, as taught by Boatwright, because Boatwright suggests that the combination would have provided a communication protocol for the modem of Razavi and de Bellefeuille that is a common manner of communication for modems (column 6, lines 62-66).

9. Claim 22, as may best be understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Razavi et al. in view de Bellefeuille and further in view of U.S. Patent No. 5,964,813 to Ishii et al.

As noted above, the invention of Razavi and de Bellefeuille teaches many of the features of the claimed invention and while the invention of Razavi and de Bellefeuille does teach performing an error diagnosis of the software any time that it is desired (de Bellefeuille; column 11, lines 20-25), the combination does not explicitly indicate that the error diagnosis is performed at a predefined time interval.

Ishii teaches a vehicle diagnostic data storing system comprising means for performing error diagnosis wherein the diagnosis is performed at a predetermined time interval (column 4, lines 48-61).

It would have been obvious to one having ordinary skill in the art to modify the invention of Razavi and de Bellefeuille to explicitly indicate that the error diagnosis is

performed at a predefined time interval, as taught by Ishii, because, as suggested by Ishii, the combination would have improved the system of Razavi and de Bellefeuille by providing automatic and periodic error diagnosis to reduce the burden of the user having to initiate the diagnosis while reducing the chance of system error through diagnostics occurring more often (column 4, lines 48-61).

10. Claims 11, 12, 14, 16-21 and 23, as may best be understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,185,491 to Gray et al. in view of U.S. Patent No. 6,246,935 to Buckley and further in view of U.S. Patent No. 6,330,499 to Chou et al.

With respect to claim 11, Gray discloses a service element that belongs to a distributed system in a motor vehicle as a component (column 3, lines 27-32), the distributed system further including other components that are independent of one another and interconnected by a bus (column 3, lines 27-32 and Figure 2), the service element comprising a processing device disposed in the motor vehicle and adapted to perform operations (column 3, line 66 to column 4, line 8) including the operations of configuring the other components (column 3, lines 36-52 and column 5, line 55 to column 6, line 1), upgrading/maintaining the other components (column 4, line 65 to column 5, line 8), and performing an emergency function (column 3, lines 52-54).

With respect to claim 12, Gray discloses that the processing device is further adapted to perform the operations of detecting a new component and for integrating

the new component into the distributed system (column 6, lines 28-53) as well as operating a display device to represent information about a configuration (column 5, lines 60-64 and Figure 9).

With respect to claim 14, Gray discloses that at least one of the maintaining and the correcting operation includes communicating with a communication element for loading new software interfaces for the other components (column 4, line 65 to column 5, line 6 and column 6, lines 34-40 and 62-64).

With respect to claim 17, Gray discloses that the processing device is further adapted to perform the operations operating a display to transfer information about the distributed system to a user of the distributed system (column 5, lines 32-64).

With respect to claim 19, Gray discloses a distributed system, comprising a bus and components connected by the bus, the components being independent of each other and being disposed in a motor vehicle (column 3, lines 27-32 and Figure 2), one of the components being a service element (column 3, lines 27-32) that includes a processing device to perform operations (column 3, line 66 to column 4, line 8) the operations including configuring the other components (column 3, lines 36-52 and column 5, line 55 to column 6, line 1), upgrading/maintaining the other components (column 4, line 65 to column 5, line 8), and performing an emergency function (column 3, lines 52-54).

With respect to claim 20, Gray discloses that at least one of the other components includes a communication element (column 4, line 65 to column 5, line 6 and column 6, lines 34-40 and 62-64).

With respect to claim 23, Gray discloses that the bus includes one of an electrical wiring system, and optical wiring system, and a radio based system (column 2, lines 55-61, column 3, lines 27-32 and Figure 2).

As noted above, the invention of Gray teaches all of the features of the claimed invention except for including performing an error diagnosis of software running on the components, in accordance with a predetermined value, and, in case of an error, correcting the software.

Buckley teaches a vehicle instrument panel computer interface and display including a central control node that communicates to a plurality of other components (column 2, lines 57-62 and column 3, lines 29-51) and performs an error diagnosis of software running on the plurality of components (column 8, lines 46-63). Buckley also teaches determining the occurrence of an error in the software using a cyclic redundancy check with a checksum value (column 7, lines 38-52 and column 9, lines 28-38) (see also FOLDOC Free On-Line Dictionary of Computing, "cyclic redundancy check"), memory check (column 9, lines 38-55) and newly downloaded software check (column 10, lines 27-33), and, upon the occurrence of an error, correcting the software to maintain correct operation (column 9, lines 36-37 and 41-42 and column 10, lines 27-33) through the updating/upgrading the components of the system (column 10, lines 27-43).

It would have been obvious to one having ordinary skill in the art to modify the invention of Gray to include performing an error diagnosis of software running on the components, in accordance with a predetermined value, and, in case of an error,

correcting the software, as taught by Buckley, because the combination would have provided a further method for determining when new updates are required, such as the updates/upgrades disclosed by Gray, and, as suggested by Buckley, provided a method for determining whether the software of the devices are updated, complete, and correct thereby insuring correct operation of the distributed system (column 8, lines 46-65, column 9, lines 28-30 and column 10, lines 30-33).

As noted above, the invention of Gray and Buckley teaches many of the features of the claimed invention and while the invention of Gray and Buckley does teach including a communication element for loading new software interfaces for the plurality of components, the combination does not specify that the communication element includes a transceiver station communicating over a radio channel or including an arrangement for allowing a remote diagnosis of the plurality of components of the distributed system and a communications element for, in the case of a serious functional error, contacting a service provider.

Chou teaches a system and method for vehicle diagnostics and health monitoring including an in-vehicle computing system (column 2, lines 55-63) connected to a plurality of elements on a bus (column 3, lines 33-37 and column 6, lines 55-56) and an arrangement for allowing a remote testing and diagnosis of the system (column 3, lines 15-31 and column 5, lines 1-15) and a communications element for, in the case of a serious functional error, contacting a service provider (column 5, lines 16-24 and column 7, lines 4-26). Chou also teaches coupling the

processor through a communicating transceiver for communicating over a radio channel to further devices such as a notebook computer (column 3, lines 47-53).

It would have been obvious to one having ordinary skill in the art to modify the invention of Gray and Buckley to specify that the communication element includes a transceiver station communicating over a radio channel, as taught by Chou, because Chou suggests that RF communication is one of a plurality of common communication means for interfacing to a plurality of devices thereby providing the user with desired method to communicate with the other devices. It also would have been obvious to include an arrangement for allowing a remote diagnosis of the plurality of components of the distributed system and a communications element for, in the case of a serious functional error, contacting a service provider, as taught by Chou, because the combination would have provided a method for adhering to space constraints of the system while still providing detailed monitoring and diagnostic functions to insure correct system operation and, as suggested by Chou, aided the user of the system by providing trouble-shooting, diagnosis, tracking, and recommendations, as well as prevented serious consequences (column 1, lines 18-30) and provided emergency responses to an emergency condition, such as the condition indicated by the emergency arrangement of Gray (column 7, lines 22-26).

11. Claim 22, as may best be understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray in view of Buckley and Chou and further in view of U.S. Patent No. 4,866,713 to Worger et al.

As noted above, the invention of Gray, Buckley and Chou teaches many of the features of the claimed invention including determining the occurrence of an error in the software using a cyclic redundancy check with a checksum value (Buckley; column 7, lines 38-52 and column 9, lines 28-38), however, the combination does not specify that this error diagnosis is performed at a predefined time interval.

Worger teaches an operational function checking method and device for microprocessors comprising performing a cyclic redundancy check at predefined time intervals (i.e. periodically) (column 4, lines 24-29).

It would have been obvious to one having ordinary skill in the art to modify the invention of Gray, Buckley and Chou to specify that the error diagnosis is performed at a predefined time interval, as taught by Worger, because the combination would have provided a method for determining proper operation periodically over operation of the device to insure accurate operation is being performed and, as suggested by Worger, the combination would have complied with operation of the system in carrying out the testing method (column 4, lines 24-29).

Response to Arguments

12. Applicant's arguments with respect to claims 11, 12, 14, and 16-23 have been considered but are moot in view of the new ground(s) of rejection.

The following arguments, however, are noted:

Applicant argues:

> Claims 11 and 19, recite the feature of, inter alia, a service element, disposed within a motor vehicle, which performs operations including "performing an error

diagnosis of software running on the other components." The recited "components" of claims 11 and 19 are independent of one another and interconnected via a bus. As regards the operation of "performing an error diagnosis ...," the Examiner acknowledges that Razavi does not disclose this feature, and instead relies on de Bellefuille.

de Bellefuille describes a computerized automotive servicing device, as may be hooked up (i.e., externally) to the electrical system of a motor vehicle. (e.g. col. 8, lines 10- 21 describing the invention as used in a wheel alignment device). The automotive servicing device is not disposed within the motor vehicle, as recited in claim 11 and 19, but rather is manually connected to the vehicle during a servicing operation. Additionally, the "error diagnosis" allegedly described by de Bellefuille at col. 11, lines 12-25 is not an error diagnosis of "the other components," i.e., other components which are interconnected via a bus within the motor vehicle, as recited in claims 11 and 19. Instead, the file integrity check tool apparently checks files that appear to be stored on the same device as the file integrity check tool.

Additionally, claims 11 and 19 recite that the service element performs the operation of "allowing a remote testing and diagnosis of the other components of the distributed system to be carried out." With respect to this feature, the Examiner apparently relies on col. 15, lines 3-10 of Razavi. Respectfully, this section of Razavi describes that a service station may request service records of the vehicle so that any necessary service may be performed. This section does not describe any remote testing of components.

The Examiner first asserts that, with respect to the limitations of a service element disposed within a motor vehicle and interconnected with other components via a bus, the invention of Razavi discloses a service element that belongs to a distributed system in a motor vehicle as a component (column 6, lines 10-18), the distributed system further including other components that are independent of one another (column 3, lines 30-33) and interconnected by a bus (column 4, lines 40-47), the service element comprising a processing device disposed in the motor vehicle (column 8, lines 21-49).

The Examiner also asserts that the Office Action pointed out that, as the invention of Razavi teaches uploading new software and performing maintenance

and updates of existing software of the other components when necessary, the invention of deBellefuille is relied upon for explicitly describing the manner for performing maintenance, specifically by performing an error diagnosis to check the software in accordance with a predetermined value.

Similarly, while Applicant argues that "the 'error diagnosis' allegedly described by de Bellefuille at col. 11, lines 12-25 is not an error diagnosis of 'the other components'", the Examiner again asserts that since Razavi already discloses a service element that belongs to a distributed system in a motor vehicle as a component (column 6, lines 10-18), the distributed system further including other components that are independent of one another (column 3, lines 30-33) and interconnected by a bus (column 4, lines 40-47), the service element comprising a processing device disposed in the motor vehicle (column 8, lines 21-49) adapted to perform operations including maintaining the other components (column 13, lines 53-61 and column 15, lines 6-13), the invention of de Bellefeuille is not relied upon to teach a service operation performing error diagnosis of "other components" but instead to modify the maintenance of other components by the service element disclosed in Razavi to explicitly describe the manner for performing maintenance, specifically by performing an error diagnosis to check the software in accordance with a predetermined value.

Further, the Examiner maintains that it would have been obvious to one having ordinary skill in the art to modify the invention of Razavi to explicitly include performing an error diagnosis to check the software in accordance with a

predetermined value, as taught by de Bellefeuille, because the combination would have provided a corresponding method for performing the maintenance of Razavi as part of the software updates that would have improved the operation of Razavi by periodically checking the integrity of the software of the other components to prevent incorrect operation due to software errors (column 11, lines 12-25).

With respect to Applicant's arguments regarding remote testing, the Examiner asserts that such an argument is considered to be moot in view of the new grounds of rejection.

Applicant argues:

> On page 16 of the Office Action, the Examiner apparently admits that neither Gray nor Razavi teach the above feature of claims 11 and 19, and instead relies on Buckley. In particular, for the error diagnosis, the Examiner apparently relies on Buckley at col. 8:46-63, and for the correcting of the software, apparently relies on Buckley at col. 7:38-52. Respectfully, in these sections of Buckley, software on other components is not being diagnosed for errors, and software on other components is not being corrected. Respectfully, the sections of Buckley relied upon by the Examiner appear to be checking the validity of messages, not software that runs on other components or otherwise. The CRC, for example, is used to make sure that the message was not corrupted during transmission. These sections do not disclose the above-cited feature of claim 11.
>
> Although the Office Action is not completely clear, the Examiner also mentions col. 9:38-55 and col. 10:27-33 of Buckley in connection with the above-cited features. Respectfully, these sections of Buckley do not describe the above-cited features of claim 11 either. These sections of Buckey appear to describe that CIPN microprocessor checks firmware that runs on itself. It does not appear to check software that runs on any other, independent component of a distributed system.

The Examiner first asserts that, with respect to the limitation of "other components" the invention of Gray already teaches a service element that belongs to a distributed system in a motor vehicle as a component (column 3, lines 27-32), the distributed system further including other components that are independent of one another and interconnected by a bus (column 3, lines 27-32 and Figure 2), the service element comprising a processing device disposed in the motor vehicle and adapted to perform operations (column 3, line 66 to column 4, line 8) including the operations of configuring the other components (column 3, lines 36-52 and column 5, line 55 to column 6, line 1), upgrading/maintaining the other components (column 4, line 65 to column 5, line 8), and performing an emergency function (column 3, lines 52-54).

Therefore, the invention of Buckley is not relied upon for teaching the "other components" but rather for performing an error diagnosis of software running on the components, in accordance with a predetermined value, and, in case of an error, correcting the software.

The Examiner also disagrees with Applicant's indication that "the sections of Buckley relied upon by the Examiner appear to be checking the validity of messages, not software that runs on other components or otherwise", but instead maintains that Buckley teaches a vehicle instrument panel computer interface and display including a central control node that communicates to a plurality of other components and performs an error diagnosis of software running on the plurality of components, specifically, the CIPN is a central interface to the other components

that polls the components for messages using a buffer arrangement, the messages including a CRC that is checked to determine if the firmware is complete and correct (column 2, lines 57-62, column 8, lines 46-63, column 7, lines 38-52 and column 9, lines 28-38). Buckley also teaches performing a memory check and a newly downloaded software check (column 9, lines 38-55 and column 10, lines 27-33), and, upon the occurrence of an error, correcting the software to maintain correct operation (column 9, lines 36-37 and 41-42 and column 10, lines 27-33) through the updating/upgrading the components of the system (column 10, lines 27-43).

The Examiner further maintains that it would have been obvious to one having ordinary skill in the art to modify the invention of Gray to include performing an error diagnosis of software running on the components, in accordance with a predetermined value, and, in case of an error, correcting the software, as taught by Buckley, because the combination would have provided a further method for determining when new updates are required, such as the updates/upgrades disclosed by Gray, and, as suggested by Buckley, provided a method for determining whether the software of the devices are updated, complete, and correct thereby insuring correct operation of the distributed system (column 8, lines 46-65, column 9, lines 28-30 and column 10, lines 30-33).

Applicant argues:

Claim 11 also recites, inter alia, the following:

> allowing a remote testing and diagnosis of the other components of the distributed system to be carried out.
>
> Claim 19 includes a similar feature. As regards this feature, the Examiner apparently admits that none of Gray, Razavi or Buckley disclose it. Instead, the Examiner relies on Chou, col. 3:15-31. As regards this section of Chou, this section describes a network interface. It does not appear that any remote "testing" of other components of a distributed system is disclosed.

The Examiner asserts that this argument is considered to be moot in view of the new grounds of rejection presented above.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:

U.S. Patent No. 5,867,587 to Aboutalib et al. teaches an impaired operator detecting and warning system employing eyeblink analysis comprising means for detecting an emergency situation (column 4, lines 33-42) and if the emergency situation is detected, acquiring a video image of a passenger (column 1, lines and column 3, lines 57-64), comparing the acquired video image with a recorded image (column 1, lines 55-66), and determining if an emergency function should be performed based on the comparison (column 2, lines 9-17 and column 4, line 66 to column 5, line 18).

U.S. Patent No. 6,060,989 to Gehlot teaches a system and method for preventing automobile accidents comprising a plurality of sensors connected to a vehicle architecture (column 3, lines 16-26) wherein the system performs detecting

an emergency situation (column 4, lines 56-60) and in the emergency situation, acquiring an audio sample of a passenger (column 3, lines 27-63 and Table 1), analyzing the acquired audio sample and (column 4, line 60 to column 5, line 5 and Table 1), and determining if an emergency function should be performed based on the analysis (column 5, lines 6-20)

U.S. Patent No. 6,313,749 to Horne et al. teaches sleepness detection for vehicle driver or machine operator.

U.S. Patent No. 6,243,015 to Yeo teaches driver's drowsiness detection method of drowsy driving warning system.

U.S. Patent No. 6,028,514 to Lemelson et al. teaches a personal emergency, safety warning system and method.

U.S. Patent No. 6,526,460 to Dauner et al. teaches a vehicle communications system.

FOLDOC Free On-Line Dictionary of Computing, "cyclic redundancy check", teaches the definition of a "cyclic redundancy check" as a method wherein a number is "derived from, and stored or transmitted with, a block of data in order to detect corruption. By recalculating the CRC and comparing it to the value originally transmitted."

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY R. WEST whose telephone number is

(571)272-2226. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571)272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey R. West/
Primary Examiner, Art Unit 2857

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